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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/765,958	01/29/2004	Hiroshi Takeuchi	MIT-024-USA-P	2329
27955	7590	10/12/2004	EXAMINER	
TOWNSEND & BANTA 601 PENNSYLVANIA AVE N.W. SUITE 900, SOUTH BLDG WASHINGTON, DC 20004			HO, THOMAS Y	
			ART UNIT	PAPER NUMBER
			3677	

DATE MAILED: 10/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/765,958

Applicant(s)

TAKEUCHI, HIROSHI

Examiner

Thomas Y Ho

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Status of Claims*

Claims 1-13 are currently pending. No claims have been withdrawn or cancelled.

### *Claim Rejections - 35 USC § 112*

**Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). As to claim 1, the description of the longitudinal connecting protrusions as being “perpendicular to the longitudinal axis of the bed”, goes against the commonly known definition of the word “perpendicular”. In addition, the specification does not clearly redefine the term “perpendicular”. In fact, the specification and drawings clearly show that the longitudinal connecting protrusions 21 are parallel, not perpendicular, to the longitudinal axis of the bed. Also, the use of “perpendicular” to describe the protrusions is not consistent with the use of the word “perpendicular” in a preceding portion of claim 1, where the bars are said to be disposed “generally perpendicular” to the longitudinal axis of the bed. If the bars are perpendicular to the longitudinal axis of the bed, and the protrusions are perpendicular to the bars, then the

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protrusions must not be perpendicular to the longitudinal axis of the bed. Claims 2-13 depend from claim 1 and are likewise rejected.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over TORAN  
USPN4785487 in view of SHIRAI USPN5377369.**

As to claim 1, TORAN discloses a bendable bottom member of a bed comprising a plurality of side by side bars 8 bendably connected with each other to allow the whole extent of the connected bars to be curved, said bars being disposed generally perpendicular to the longitudinal axis of the bed, one of every adjacent two of the bars is provided with a plurality of longitudinal connecting protrusions being generally perpendicular to the longitudinal axis of the bed, while a plurality of recesses are formed in adjacent bars for accepting protrusions extending from an adjacent bar, in such a manner that the connecting protrusions of the bars can be inserted into corresponding recesses of an adjacent bar said protrusions having at tips and bases thereof first and second beveled portions, respectively, forming clearances between the protrusions and corresponding recesses to allow the connecting bars to be bent in one direction and disengagement preventing means 35 formed at a tip of some of the connecting protrusions. FIGURE A better shows the cited structures of TORAN and is depicted below. While TORAN discloses side by side bars 8, they fail to show the ability to be shortened and extended; while

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TORAN discloses disengagement preventing means 35, they fail to show disengagement preventing means comprising hooks formed at a tip of some of the connecting protrusions; while TORAN discloses corresponding accepting recesses, they fail to show corresponding accepting recesses having steps therein adapted to engage the hooks, so that the hooks and steps are engaged with each other when the respective adjacent bars are kept furthest away from each other; as recited in the claims. SHIRAI teaches a bottom structure of a bed similar to that of TORAN. In addition, SHIRAI further teaches the ability of the bars 8 to be shortened and extended (Fig.4), disengagement preventing means comprising hooks 11/14 formed at a tip of some of the connecting protrusions 9, and corresponding accepting recesses 13 having steps therein adapted to engage the hooks 11/14, so that the hooks 11/14 and steps are engaged with each other when the respective adjacent bars are kept furthest away from each other (Fig.4). It would have been obvious to one of ordinary skill in the art, having the teachings of TORAN and SHIRAI before him at the time the invention was made, to modify the protrusions and recesses disclosed by TORAN to include the hooks and steps, respectively, of SHIRAI, in order to obtain a bottom bed member having side by side bars that are engaged through projections and recesses wherein the hinge between the bars comprises of hooks on the protrusions and steps on the recesses that engage when the length of the distance between the bars is fully extended. The combination will replace the pin retaining members 35 of TORAN and will modify the ends of the bars 8 of TORAN to have the slotted ends 13 and hook retaining members 9 of SHIRAI. One would have been motivated to make such a combination because the overall length of the bottom could be adjusted in the longitudinal direction, as taught by SHIRAI (Col.4, ln.40-45).

(BLANK SPACE...TEXT CONTINUES AFTER FIGURE A ON NEXT PAGE)

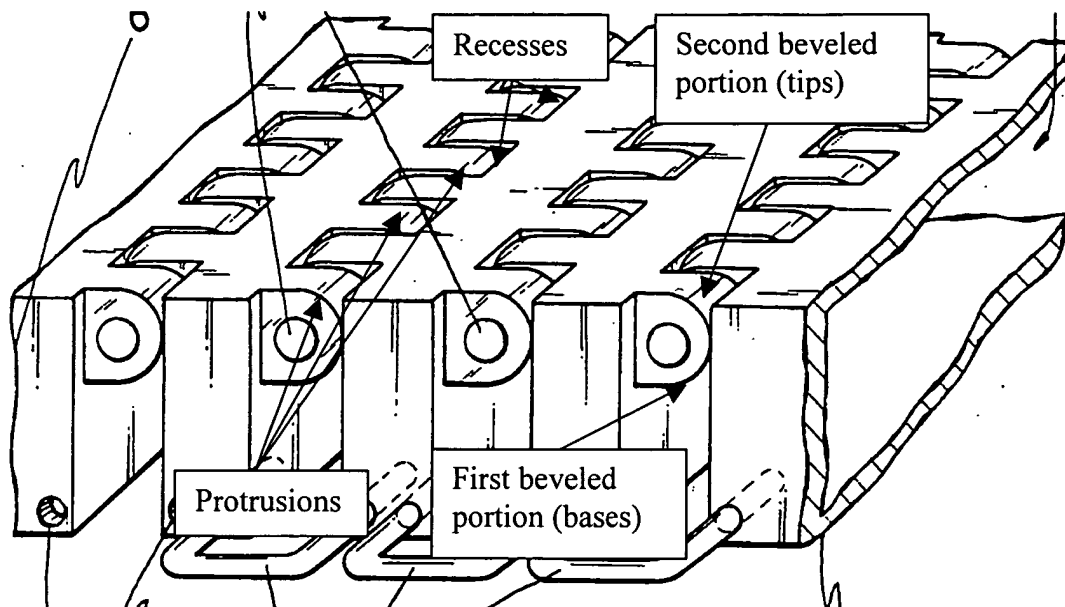


FIGURE A (TORAN)

As to claim 2, TORAN discloses a bar 7 (Fig.11) disposed at an end of the bendable bottom member 8/8/... on one side has only accepting recesses.

As to claim 3, TORAN discloses first beveled portions are formed on lower sides at the tips of the connecting protrusions while second beveled portions are formed on the upper sides at the bases of protrusions, to use the bendable bottom member as a bendable portion between the back region and the waist region. See FIGURE A above.

As to claim 4, TORAN discloses first beveled portions are formed on the upper sides at tips of connecting protrusions, while second beveled portions are formed on lower sides at the bases of protrusions, to use the bendable bottom member as a bendable portion between the waist region and the leg region. See FIGURE A above, but reverse the labels of first and second

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beveled portions. Claims 3 and 4 are not interdependent and so the alternative interpretations are valid.

As to claim 5, TORAN discloses the second beveled portions at the bases of the connecting protrusions are inclined in adaptation to the desired bending angles with the adjacent bars. See FIGURE A above.

As to claim 6, SHIRAI discloses hooks 11 formed at tips of connecting protrusions 9 are provided with the disengagement preventing means 13 while steps (front abutments of 13) to be engaged with the hooks are formed in the corresponding accepting recesses 13, to allow the bottom bed member to change in length as desired. Refer to claim 1 above.

As to claim 7, TORAN discloses second beveled portions at bases of connecting protrusions are inclined in adaptation to desired bending angles with adjacent bars.

As to claim 8, TORAN discloses second beveled portions at bases of connecting protrusions are inclined in adaptation to desired bending angles with adjacent bars.

As to claim 9, TORAN discloses second beveled portions at bases of connecting protrusions are inclined in adaptation to desired bending angles with adjacent bars.

As to claim 10, SHIRAI discloses hooks 11/14 at tips of the connecting protrusions 9 are adapted to engage with steps formed in the corresponding accepting recesses 13. Refer to claim 1 above.

As to claim 11, SHIRAI discloses hooks 11/14 at tips of the connecting protrusions 9 are adapted to engage with steps formed in the corresponding accepting recesses 13. Refer to claim 1 above.

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As to claim 12, SHIRAI discloses hooks 11/14 at tips of the connecting protrusions 9 are adapted to engage with steps formed in the corresponding accepting recesses 13. Refer to claim 1 above.

As to claim 13, SHIRAI discloses hooks 11/14 at tips of the connecting protrusions 9 are adapted to engage with steps formed in the corresponding accepting recesses 13. Refer to claim 1 above.

### *Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1. US4222134 to Degen discloses an under-mattress for beds.
2. US4696070 to Degen discloses an undermattress for reclining furniture.
3. US5222263 to Magistretti discloses an upholstered element with continuously unidirectionally shapable flat internal frame.
4. US5369826 to Ikeda discloses a bottom structure of a bed.
5. US5469591 to Nomura discloses a bottom structure for a bed.
6. US5388290 to Shirai discloses a bottom structure of a bed.
7. US5475880 to Guenther discloses a foldable bathtub transfer seat.
8. US6061873 to Fry discloses a patient support apparatus and hinge device.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas Y Ho whose telephone number is (703)305-4556. The examiner can normally be reached on M-F 10:00AM-6:00PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J. J Swann can be reached on (703)306-4115. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TYH



**ROBERT J. SANDY**  
**PRIMARY EXAMINER**